

Revitalization Analysis of Croatian Wood Processing Facilities in ECRA Municipalities

Submitted by:



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ATTACHMENTS

Attachment A: General Situation in the Wood-Processing Industry

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Executive Summary

FLAG International LLC (FI), sponsored by Mercy Corps and the United States Agency for International Development, has conducted a revitalization analysis of six wood processing facilities in the war-affected areas of Croatia, a defined geographic territory significantly and negatively impacted by the recent conflict. The analysis is intended to evaluate those companies' present state of affairs and their prospects, if any, for future survival and profitable operation. These evaluations are made on a case-by-case and company-by-company basis.

FI conducted its analysis on the following facilities, located in or near ECRA municipalities:

- DI ISADE - Vojnic
- DIP Gvozd - Gvozd (Vrginmost)
- DIP Pljesavica - Donji Lapac
- DI Šamarica - Dvor na Uni
- DIP Majur - Kostajnički Majur
- DI Papuk - Pakrac

FI's goal is to provide an informed, concise and accurate evaluation of the prospects for the six companies. To accomplish this goal, FI has performed a review of the existing assets and the production possibilities for each facility including determining the financial, managerial and time investment necessary to restart production; conducting a product marketing analysis including the most profitable potential product mix based on available wood resources and current market needs; evaluating the condition and estimated value of the existing assets; and assessing the value of debts and other liabilities. Our review has been as thorough as possible, but constraints exist to gathering information at both the industry-wide and firm levels. There are no areas where constraints have not been overcome sufficiently by our research to make it likely that new information would change our analyses or conclusions.

In general, there are significant operational challenges facing the existing facilities in the ECRA municipalities. A partial list of the factors leading to this situation include:

- Significant war damage to buildings and equipment, including looting and asset stripping;
- Non-transparent privatization of assets, often resulting in high debts and bankruptcy;
- Lack of working capital and financial resources;
- Lack of managerial expertise and adequate financial controls;
- Lack of working capital that precludes access to quality raw wood;
- Absence of reliable land records indicating the exact level of land and assets owned by each facility, making it difficult to provide collateral to secure bank financing.

During the 8-week period of the analysis, FI has been in contact with numerous organizations and individuals, including the Croatian Privatization Fund (CPF), various bankruptcy court managers, former owners and workers, municipal officials and banks. As the inquiries progressed, four significant findings emerged:

- Destruction and looting has occurred to the extent that it would be more economic to construct entirely new facilities than to refurbish some of the existing ones, particularly in Donji Lapac and Gvozd.

- Although all of these facilities are in, or very near, a state of bankruptcy, and have been in some cases for many years, the situation has not been static. In fact, the status of each of the facilities is in flux at the moment.
- Ownership or, put another way, the ability and authority to use effectively or dispose rationally of the assets of each company, is not always clear. This is because companies have not been privatized (Pakrac) or have been privatized and the private owners were not able to make good use of the assets (Majur) or debt has been incurred but not serviced and the creditor has taken control (Vojnic).
- Research by FI in uncovering information about the facilities has *in itself* generated increased interest on the part of the CPF and bankruptcy court managers in moving forward and taking steps to transparently resolve the ownership of some of the facilities. Activity by the CPF and Karlovac bankruptcy courts to resolve the asset disposal situation of specific facilities has significantly increased, apparently in response to the perceived “international interest” in some of the facilities. Vojnic and Majur are cases in point.¹

In the course of this paper, conclusions and recommendations are made for each company within the analysis of that company. Additional and more general conclusions are reached at the end of this report as well as a recommendation of action that might be taken by the donor community resulting from lessons learned while analyzing these six wood processing companies.

1. General Situation

1.1. Overview

The wood industry in Croatia has a number of comparative advantages due to the quality and quantity of hardwood forest in the area, coupled with a highly experienced and low cost production labor force and a traditional international market. But there are fundamental shortcomings in overall performance among the majority of members of the industry. These shortcomings follow from the socialist era of state-owned companies and central planning. Specifically, there is a distinct lack of skill and expertise in the areas of innovation, sales and marketing, product development, financial planning, long-term forecasting, strategic planning, commercial integration and business development. There are also legal matters of title and debt that remain to be clarified.

The companies that are the subjects of this report demonstrate the same malaise. There have been unusual privatization transactions, coupled with asset stripping and extraction of wealth from the companies. There is a common theme of mismanagement and poor management skills at critical levels in the companies. These issues are more pronounced in the ECRA regions, since these areas have offered little to attract top managers and external investors, prior to and following the war.

The purpose of this analysis is not to review the Croatian wood processing industry in general, but in the interest of providing some additional context, Appendices A and B give background information on the industry as a whole.

¹ In both cases, it was originally intended by the bankruptcy courts to dispose of the assets in an unusual and non-transparent manner (Majur by immediate but unpublicised public auction, Vojnic directly to Karlovacka banka). FI believes that questions posed and apparent international interest may have unintentionally prevented this from occurring.

1.2. Premises

The major premise within this analysis is that the manufacturing sector within the wood industry is sustainable over time and that the comparative advantage of readily available, high quality oak and beech hardwood trees can be turned into a competitive advantage given enlightened management practices, appropriate financing and aggressive marketing.

This report is based on the following premises concerning the wood industry in general and Croatia in particular:

- Oak and beech hardwood is consistently in demand globally
- Croatian forests are managed reasonably well and are sustainable in the long term
- Croatian oak and beech have inherent, quality performance parameters and can be applied to proven products, demanding quality hardwood
- Wood sector companies which are state-owned have been allowed to deteriorate
- Croatia has a long tradition of exports in wood and wood products
- Semi-finished wood products are global commodities and therefore have readily available markets at known prices
- Wood products manufacturing requires domestic supply and that such supply may be from several cooperative and integrated sources
- The domestic population of Croatia (and former YU) cannot consume the base load volumes of semi-finished and finished wood products which would reduce the Cost of Goods Sold by manufacturers
- Current returns on investment and profitability are currently below acceptable levels in the sector due to inefficiencies and fixed costs
- Privatization has not been completed and many “private companies” have ownership issues, bankruptcy issues, and legal matters impinging on financial performance

2. Analytical Framework and Methodology

While some of the six companies have somewhat better prospects than others, none are in good condition or show clear promise. The method of analysis applied by FI has been to determine what steps would be necessary, from a general business point of view, to revitalize any company in similar conditions to these six and then to apply those steps in the specific case of each of the six. These steps are divided into three levels of effort. This analysis incorporates all relevant investigation findings, a FINPRO² analysis for each company and an evaluation of where each company stands at present.

In the case of each company, proforma recommended actions are given for steps that might be taken by a new owner making a de novo investment:

Level I	Potential activities and outcomes for the company given the fact that there would be limited assistance and that such assistance would be in the form of certain debt relief flowing from bankruptcy proceedings, debt restructuring, and a minor cash infusion of less than USD 250,000 raised by new owners
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² FINPRO is a term describing a specific type of financial, technical and managerial audit conducted on manufacturing facilities to determine operation and revenue potential. The FI team conducted this analysis on all the facilities that are the subject of this report. The analyses are summarized later in this report.

through debt or equity financing for working capital only, following liquidation of inventories as possible.³

- Level II** Potential activities for the company given that a Level I condition is achieved, plus additional funding of up to USD 250,000⁴ through bank guarantees and other instruments, which would result in adequate refurbishment of equipment to achieve such proposed activities and outputs, as well as adequate working capital to meet sales and cash flow projections over a three year term, and, finally, support in the form of Technical Assistance and a Consultancy Agreement to assist in the management of the company
- Level III** Potential activities and outcomes for the company given that Level II assistance were available, plus additional debt or equity financing of up to USD 500,000 through the entrance of a strategic partner or financial investor, which would bring such funding through equity and such proposal would include an investment plan, based on market demands and capabilities of the refurbished enterprise.

The team then recognized the practical limitations facing the prospects of the companies in the ECRA region and determined that a base case, or Level I case, should be proposed, acknowledging the low probability of either further significant debt or equity investment in the companies as they stand today. There is a basic assumption within the Level I case that a proper Turnaround Plan would raise cash and attract a minor amount of working capital through present creditors and the concurrence of the bankruptcy agents.

The team then decided to develop a Level II and a Level III strategy for each company, where appropriate, in order to attract providers of credit and other support, based upon a more realistic steady-state of operations, given the relevant investments and cash infusions. Therefore, the rationale behind the recommendations is that a properly implemented Turnaround Plan for each of the recommended companies would lead to positive cash flows, which would lead to the Level II and Level III strategies, over the near term.

Operational Implications

With the exception of DI Papuk in Pakrac, which is still engaged in commercial operations (albeit on the verge of bankruptcy) none of the facilities addressed in this report are currently operating. Except for Papuk, all of them have been completely vacant for at least a year, in some cases more than two years, while decay and theft of assets has continued unabated.

The input data for the FinPro analyses were selected on the basis of the implementation of an initial Turnaround Plan at each company. This implies a very low level of working capital, which would be raised by liquidation of assets and inventories, wherever possible and through limited financing from third parties, as available. The levels of production and sales were restricted to the levels of raw materials available with these related low levels of initial working capital. The labor forces were restricted to minimum levels to achieve these production levels. Effectively, the sales revenues were arrived at by applying current existing

³ In all cases, USD 250,000 is the minimum necessary investment in terms of working capital and equipment improvements necessary to restart production.

⁴ Amounts of necessary investment per level are cumulative.

production capabilities and the resulting product mixes to the expected volumes of raw material inputs, as noted above. Further assumptions were that the production cycle would be 30 days and the receivables would be based upon 60-day terms to the customers.

The successful implementation of Level I support for the recommended companies by a consulting team or potential new ownership will assist in securing the minimum investment necessary in working capital in order to re-start processing capacities. Such restarts will be limited to actual existing capabilities, utilizing relevant equipment and facilities in an “as is” situation. The FI team recommendations are “common sense” suggestions based on significant experience in the wood-processing sector. These measures can potentially lead to revitalization in the most intact facilities, namely Vojnic and Majur.

Level II support for the facilities presumes new ownership that has implemented Level I support as well as indicated readiness for steps leading to Levels II and III. It is clear that significant amounts of financial and managerial resources need to be invested into the majority of these facilities. However, this support will not be forthcoming without awareness on the market that the existing facilities are capable of a certain amount of production and resulting revenues. Level II support for the facilities in Dvor and Pakrac can lead to their revitalization, presuming that an experienced management or consulting team is available to exercise operation control of the facilities.

Level III support for the facilities presumes new ownership that is capable of significant investment into repair and reconfiguration of the fixed assets. A minimum level of USD 1 million for asset refurbishment, reconstruction and working capital requirements means that in most cases, Level III support is not foreseen to be available. If Level III support is to be secured, it will be on the basis of a detailed business plan presented to a financial investor or strategic investor. The facilities in Gvozd and Donji Lapac will require a Level III intervention if they are to be restarted.

Barring the sale or disposal of the non-productive facilities in the short term by their current owners (the CPF, courts or other), it will be necessary to develop business and marketing plans for the facilities that, in FI’s view, can be viable operations, presuming the appropriate level of support. Sales projections and cash flows will confirm the viability of the business plan and the benefits for the strategic partner or investor. Equity or debt financing must be secured of a sufficient level to provide for faculty refurbishment and restart. Further information on what is required for this is outlined later in the report.

3. Company Profiles and Strategic Initiatives

3.1 DI “ISADE” - Vojnić

Background and Current Situation

This company was founded by the former Yugoslav government in 1988 as a source of employment for invalids and went into bankruptcy less than one year thereafter. The facility was organized to produce the fronts of dresser drawers but it actually never produced any products. After the recent conflict it started producing boards, but at a low capacity due to the lack of working capital. War damage is minor, and the property and buildings are in good repair. The entire property is paved and fenced. The company has been idle for the past two years and has been in the bankruptcy court system for over one year.

The primary finished products of DI ISADE were glue/lam block boards, which are boards made by gluing together a series of solid beech wood elements. Standard sizes for such products are 1 meter x 2 meters, or 1 meter x 3 meters, etc. The element size varies with the thickness of the board required. There are currently 50 – 100 cubic meters of finished goods in the storage and shipping areas. This production has a current market value of approximately USD 800 per cubic meter.

The Karlovac bankruptcy court representative was not cooperative; he was uninformed about the details of the company and had no written information. He further stated that there were no records, business plans or financial documents available. Finally he admitted that he was not in control of all the assets and that there was a bank (Karlovacka banka) with a direct claim on much of the woodworking equipment. The management of the bank confirmed the statements of the court representative, and provided FI a list of the equipment under their ownership. Over 80% of all useable equipment is in the ownership of the bank.

Raw material

The raw material (processed elements instead of logs) for the factory can be readily purchased throughout the region, at reasonable prices. Additionally, if a potential strategy (as proposed by the FI team) is to utilize finger-joint elements to process the boards, then these semi-finished elements could be purchased from Bosnia and Herzegovina at relatively low cost. However, there are a number of sawmills in the region that would also compete with each other to supply Vojnić.

Products and markets

A concentration on producing finger-joint boards, where the primary market is Germany with secondary markets of Denmark, Sweden, Italy, Belgium and Austria among others, should be pursued. The future marketing and sales department of this factory should be very attentive to this market, as demand for varied thickness may change rapidly.

Prices of these goods at the moment are in a downward trend, but most Croatian suppliers of these products are still operating at full capacity. There are about 10 producers of this board; some of them produce only glued by width, as potentially in Vojnić. The margins of this

have dropped sharply in the course of the last two years, due to increased competition from the Eastern Europe and Baltic countries. Croatian producers responded by cutting the input prices and sharply raising efficiency.

Product	Market
Finger-joint boards	Germany
	Denmark
	Sweden
	Italy
	Belgium
	Austria

Human Resources

Most industry experts agree that production of finger-joint boards is more complicated than producing furniture. Therefore, at least two engineers with experience in this type of production are crucial for the plant. These engineers are available, and currently unemployed, in the Vojnic area.

Equipment and Technology

The band saw requires a complete overhaul, following which the capacity would be 20 cubic meters per shift. The boiler, as with all equipment, is relatively new with few working hours, and is reported to be operational, but this is questionable without refurbishment at minor level. Other equipment is in workable condition, but the individual output of these machines is low and the plant layout is inefficient. Most other Croatian producers of finger-jointed glue/lam boards have better equipment. Some of the existing equipment is not needed if the product mix will remain limited to glue/lam boards.

The layout in the main production room is inefficient and requires reconfiguration. The primary products storage area has insufficient storage area for drying and requires proper sheds for air-dry staging. The sawmill, as stated above, is in disrepair and requires a complete overhaul. The kiln driers are not damaged, however these must be calibrated and computerized. The boiler will require refurbishment and engineering certification prior to certification for operation. The frame saw is rebuilt and is ready to operate. All other machines are in good working order and require level-one maintenance and spare parts only.

Equipment	Quantity
Dry kiln chambers, Riko (1988)	3 x 100 m ³
Band saw, Artiglio 1300 (1979)	25 m ³ /day capacity (KB)
Frame saw (1988 rebuilt)	30 m ³ /day capacity - one shift
Boiler with, wood fired EMO (1988)	2.5 MW / 6 bar capacity
Large forklifts	2 units (KB)
Small lift carts	4 units (KB)
Star wheel press, Taylor (1988)	1 unit (KB)
Planers	2 pieces (KB)
Edgers	2 pieces (KB)
Trimmers	2 pieces (KB)
T/G machine	1 piece
Twin belt sander	1 piece (KB)
Edge molding machine	1 piece (KB)
Glue/lam press	1 piece

Several secondary wood-working machines	Various pieces
Maintenance shop with band saw sharpening	Standard machines
Shipping and storage areas	2 halls
Cafeteria (equipped)	1 hall
Offices	8 rooms

KB = Owned by Karlovacka Banka

Financing

The company has no funds. Following the settlement of bankruptcy procedures, the local bank, which is holding title to equipment, will need to be persuaded to stay involved with the company, perhaps with a combination of debt and equity, in order to receive cash payments for the bank-owned equipment.

Ownership

The initial owners, following privatization, were three partners, and the company was called K-Drvo. However these owners were unable to repay the debts and they subsequently sold the facility to Mr. Reichl, a financial investor with no wood experience, and the company's name changed to ISADE. Despite a large bank loan, Reichl was also unable to maintain profitable production and positive cash flows. Due to this final bankruptcy, the valuable production equipment has been repossessed and is now the property of Karlovacka bank.

There have already been numerous tenders for sale in the newspaper with decreasingly lower cost of acquisition, however no interest was shown over the course of 12 months until the plant was recently sold by auction. The purchaser and new owner of the facility is LIM d.o.o., a company in Karlovac.⁵

Recommendations

Now that the company is being transferred to private ownership, there is no longer a role for the Croatian legal system or the international community in the revitalization of the facility. It will be the decision of the new owners as to whether the facility will function in accordance with the recommended initiatives below. FI intends to be in contact with the new owner, assuming that the transaction is completed, to ascertain if technical assistance is necessary or desired.

This is potentially a profitable plant and a return on capital investment could be realized in a relatively short period of 3 years. This plant is viable as part of a larger concern that could process niche products, such as cherry, alder, ash or black walnut. Larger production is difficult to obtain in such a small facility and therefore the company must build earnings, in order to expand in the near term. The owner may gain significant benefit in operating the facility by implementing FI's Level I and II recommendations, below.

⁵ As of 10 June 2002, LIM d.o.o. has not yet officially taken title to the facility but according to the bankruptcy court in Karlovac, is expected to do so soon.

This plant was originally designed for secondary processing and did not anticipate primary cut operations. It is therefore of high importance to refurbish the capacity for drying in its kilns. This scenario requires purchase of green (not dried) elements, as primary condition for profitable production. If such elements are not dried under strict supervision and control of technical staff the resulting waste in the drying process could reach 25-30 % of total volume of each drying cycle. The company must install automated controls for the drying process. Initial investment should be approximately USD 200,000. FinPro predicts that the company will be able to meet its short-term obligations. Initially the drying chambers should be organized as mixture of pre-drying and drying. Such a combination will decrease the waste in the drying process to a level of 8-10% maximum.

Recommended Initiatives for Vojnic

Level I

Action	Objective	Result
Sell all finished and semi-finished goods in inventory	Raise cash from the sale of approximately 100 cubic meters of products at a selling price of USD 800 per cubic meter	Apply revenues to working capital and acquire raw materials and/or repair equipment
Negotiate supply agreement with HS for primary cut hardwood planks, air-dried, unedged or elements of appropriate sizes	Obtain cost-effective reliable source of raw materials to utilize the kiln driers and the balance of operating machinery	Reliable supply chain and feasible terms and conditions without the cost of refurbishing the sawmill
Choose the appropriate level of employment to satisfy production and meet sales projections according to initial FINPRO analysis	Establish capable and trustworthy management team and production team to suit the Turnaround and start-up plan	The Turnaround Plan will dictate the level of direct labor and overheads in order to meet realistic sales projections for glue/lam boards
Establish configuration of all existing equipment and facilities needed to meet the sales projections and quality	Re-start appropriate existing equipment with minimum maintenance and repairs	Unedged planks will be kiln dried, edged and cut into elements for manufacturing of glue/lam boards
Secure export contracts for full capacity of the existing configuration	Retain steady revenues and build positive cash flows	Retained earnings can be applied to future investment plan

Level II

Action	Objective	Result
Establish agreement with HBOR, HGA, DCA or other guarantee agency, possibly as part of creditor settlement with Karlovacka banka, to arrange for bank loans and guarantees	Devise and fulfill an investment plan which includes complete refurbishment of equipment, boiler and computerization of kiln driers	The operations of the company would be returned to the intended outputs and capacities with associated revenues and profitability
Establish long term export sales contracts for glue/lam boards and cooperate with HBOR for credit insurance and export credit agency instruments	Take advantage of all facilities offered from HBOR export credit agency in order to secure financing of export sales	Receivables from international buyers will be guaranteed and factored

Pursue cooperation with all available international agencies, such as the World Bank, IFC, UN, UNHCR and all NGOs	Gain all possible benefits from international donor community to cooperate with overall objectives	Technical assistance, humanitarian assistance, municipal programs and related regional programs will gain synergy and provide indirect financial benefits
Implement technical assistance for management performance improvements	Impart western standards of financial controls and other management skills	Adherence to improved business practices will gain higher returns and sustainable operations

Level III

Action	Objective	Result
No activity necessary due to change of ownership		

3.2. DIP 'Gvozd' (formerly Vrginmost)

Prior to the war, DIP Gvozd employed 450 workers and produced sawn lumber, elements and furniture components. The company processed 90% beech and 10% oak for the furniture and chair industry. In its earlier iteration, circa 1965, the company had two peelers and produced veneer out of beech. This equipment no longer exists. The sawmill dates back to 1973 and is in significant disrepair, although this could be refurbished at significant cost. The kiln driers are beyond repair and are also of obsolete and inefficient design. The steam pits can be replumbed and refurbished, since the insulated hoods are in reasonable condition, but this would be time-consuming and expensive. There are two large production halls, which are completely empty. There are 22,000 square meters of pavement surrounding the buildings. The boilers have not functioned since 1994 and most likely must be replaced, or at least completely rebuilt.

The company was privatized through by CPF in 1997. Three persons involved in construction contracts for the Croatian government (reconstruction for war damage), took shares of the company in lieu of certain cash payments. These three people own 60% of the shares and have a primary interest in selling the company. They have also applied to a local bank for USD 1.4 million in loans for an investment in a new boiler, dry kilns and required working capital. There are three new private sawmills in the local municipality, although only one has kiln-drying capacity (100 cubic meters).

Gvozd ceased working in June 2000, burdened with significant debts. Presently only firewood is being produced in one of the empty buildings.

Raw Materials

There is no problem in obtaining the necessary quality and quantity of raw materials in the local area. The beech wood is of normal quality and there is insufficient capacity in the region to process these logs, so the HS is likely selling this quota to other parts of Croatia.

Products and Markets

It could be possible to produce unedged beech planks of I/II, M and III grades, with about 10% of IV quality, and sell directly from the sawmill to be palletized for export to Italy or Austria. The balance could be cut to fixed dimensions and air-dried. The product mix could be changed if they put the steaming chambers in use. In a second phase of investment they could produce elements for chairs. There is a market for these products in Germany, France and Benelux, as well as in Croatia. However, a precondition for this would be the repair of the boiler and significant upgrades to the drying capacities.

Product	Market
Unedged beech (I/II, M, III, IV)	Italy Austria
Chair elements	Germany France Benelux Croatia

There are three newer, privately owned sawmills in the local area, although only one has kiln-drying capacity (100 cubic meters). With newer equipment and less overhead, these facilities will be significant competition for DIP Gvozd in the event it restarts operations.

Human Resources

The sawmill is currently employing seven workers. They are mainly engaged in guarding the facility, with a limited firewood-chopping operation. It is expected that there would be no problem in finding workers with experience in the wood processing industry in the region of Gvozd, if a substantial re-start of the company were to occur.

Financing

The company owes approximately USD 73,200 to HEP (the state electricity utility) as well as approximately USD 61,000 to Hrvatske šume. The owners recently approached Privredna Banka and Hypo Bank for a loan in the amount of USD 1,400,000 (\$1,000,000 for equipment investment and \$400,000 for working capital). The level of receivables is approximately USD 244,000, which will likely not to be paid at all due to last year's bankruptcy of the applicable debtors to the company.

Equipment and Technology

The sawmill needs a complete overhaul and the elements factory requires level-two refurbishment. The boilers and kiln dryers are not salvageable and need to be replaced. In order to increase profitability, the entire line should be rearranged, as it is organized for cutting quantity, not quality. The outcome would be the simplification of the line, providing for an increase in speed and throughput and thereby lowering unit costs.

The second phase of processing is in reasonable working order, but the machines are very old and not in good condition. The sawdust collection system is of a large central design and would be costly and ineffective to operate due to the volume of wood materials required to fill the pipes and to run the boiler. The first stage of production would not generate enough wood material to fill such a system. Initial estimates indicate that well over USD 500,000 is required just as an investment into existing fixed assets necessary to restart production.

Equipment	Quantity
Sawmill 35,000 m ³ / year:	2 head rig band saws 1 re-saw
Elements factory	2 cross-cutters 5 small band saws 2 rip saws, 1 edger
Dry kiln chambers	4 x 50 m ³
Wood-fired Boilers (coal back-up)	1 x 8 T/hr 1 x 16 T/hr
Pre-dry chambers	7 x 100 m ³
Production hall (empty)	50 meter x 150 meter
Production hall (empty)	60 meter x 100 meter
Profile mill (empty)	50 meter x 100 meter

Ownership Structure

Six owners own 94% of the company, with the remaining 6% owed by the CPF. Three of the partners own 60% of the company, and as noted above, these investors (who are basically speculators) stated that they would be happy to sell their stake to any interested party.

Potential Partners/Buyers

During the course of FI's inquiries, three nearby sawmills expressed limited interest as potential buyers or partners:

Drvo Blatuša (owner Mr. Milić): very small operation, without drying capacity, which processes a few hundred cubic meters of logs from time to time.

Vencler (owner Mr. Žarko Kukulj): a local manufacturer, processing lower quality of logs for products for the Egyptian market, which is a good outlet for the HŠ. The owner complained about lack of human resources, and stated that the locals prefer to live on humanitarian welfare.

Pavelić (owner Mr. Pavelić): a former banker, who recently made an investment in drying facilities. He lacks of working capital and is negotiating with Italian and Germans for the investments.

Recommendations

There is a very large investment needed, specifically in the boiler and the drying capacities and also for most woodworking machinery. The kiln drying chambers must be replaced and the steaming chambers also need significant investment. Furthermore, the facility is extremely large, with high municipality taxes, utilities and maintenance and the fixed costs for such an enterprise would be relatively high, compared to the sales revenues. Two-thirds of the building space would be not used at all in any initial re-start.

The complex at Gvozd is of such size and complexity, and in such a state of disrepair due to war-related asset stripping, that in the opinion of the FI team it is not viable to re-start any portion of production without significant levels of renovation and capital investment. The current senior management has put together an investment plan, which calls for a loan of USD 1.4 million. In FI's view, a realistic assessment of potential production levels based on this investment do not support a decision to invest substantial resources into the facility.

Recommended Initiatives for Gvozd

Level I

Action	Objective	Result
No action recommended since there is no possibility of commercial activity without significant investment		

Level II

Action	Objective	Result
No action recommended since there is no possibility of commercial activity without significant investment		

Level III

Action	Objective	Result
No action recommended since there is no possibility of commercial activity without significant investment		

3.3. DIP 'Plješevica' Donji Lapac

Background and Current Situation

This company was a large, fully integrated sawmill and elements plant. There are 56,000 square meters of property, situated 120 kilometers from Split. It has steam pits and kiln driers. It also has a veneer peeler. At its peak, prior to the war, it employed almost 400 people. Donji Lapac operated during the war, and there were even some new equipment purchases just before the end of the war. All of the equipment has now been stolen or is in disrepair.

Privatization has been completed through a "transfer" of the company to a specific shareholder. This shareholder further received a USD 850,000 loan from HBOR to fund the turnaround of the company. The shareholder subsequently removed all funds from the company and fraudulently redirected the loan, an act that resulted in a short prison term.

The company stopped production in 1997, and has been in the hands of the Karlovac bankruptcy court since September 2001. The bankruptcy court manager has written off 80%

of the creditors' claims and is in full control of all assets and activities. The bankruptcy court plans to hold an auction to sell the entire company within the next few months. The court manager has already held a limited auction and has sold what remains of the most valuable equipment to private buyers, in a non-transparent way. This has significantly reduced the expected sales value, if any, of the facility.

Raw Materials

There is an adequate supply of beech in this region. It is the so-called 'red' beech species, with a large portion of heartwood, and this type of wood is very easy to curve and manipulate. Hrvatske Sume is interested and compelled to have reliable producers from this area, in order to properly exploit the local forest and keep them healthy. Distant sawmills using these logs require expensive transport by truck, due to the distance. The railroad's capacity is low at the moment, partly due to its old infrastructure as well as on-going reconstruction, and this option is not available. The port of Zadar is not a functioning export port for wood products at this time, nor is Šibenik. The Šibenik port has plans to start operations again during late 2002. This will vastly improve a producer's competitiveness in this region, as the possibility will exist to gain market share in the Egyptian market.

Production and Markets

If operations were possible again, first quality logs and planks could easily be sorted for the production of standard, steamed beech elements for the Italian market. It would be necessary to invest in new steaming chambers for this effort. Lower quality planks and the heart wood planks over 2 meters could be sold to the Egyptian market. Heartwood less than 2 meters could be sold to pallet makers in Croatia.

If the HŠ would be willing to cut certain logs on specific fixed dimensions, railway ties could be produced by this company and impregnated for preservation elsewhere. Currently, the demand for the railway ties in Croatia is much greater than the supply. Croatia is for the moment importing railway ties, which is unnecessary, considering the quantity and quality of hard wood available as well as the idle capacity in most sawmills.

Human Resources

The availability of skilled workers is not a problem here, as there is high unemployment and no significant employers in the municipality or the region. The traditional labor expertise remains from the time the company was producing. Assuming that a restart was technically feasible, the workforce must be at an efficient, manageable size of approximately 40-50 workers, rather than the previous 400 workers.

Technology and Equipment

The sawmill started production in 1968. There are two original Canalli band saws, produced in 1968 and a newer Bratstvo 1400. The layout of the manufacturing was prepared in 1968 and is obsolete, although these sawmill machines are still in place.

It is difficult to further describe the balance of the machines, as they have been so thoroughly cannibalized. All the electric motors are missing, as well as most of the controlling switches and other electrical panels. This equipment, in such disrepair, is so old that it is many times cheaper to buy second hand replacements of modern European equipment. The chips and sawdust collection system reportedly works, with a significant capacity.

The drying kilns have a capacity of 70 m³ each, however these are not functional. They have old, inefficient vertical heaters and no computerization. Steaming chambers have also capacity of 70 m³ and are also in bad condition. The refurbishment in this case necessitates a large investment. The boiler is very large and is of excessive capacity, even when the factory had operated at full capacity. As the boiler is so large, firing it would be inefficient and very expensive, creating high energy and electricity costs. Furthermore, there would not be enough chips generated, at the operating levels recommended, to feed the system. Using another fuel type would also be too expensive. Without a boiler system, there is no steam for the steaming chambers, the kiln drying chambers nor general heating.

Equipment	Quantity
Sawmill 35,000 m ³ / year:	2 head rig band saws 1 re-saw
Elements factory	Equipment has been removed
Dry kiln chambers	4 x 70 m ³
Wood-fired Boiler	1 x 16 T/hr
Pre-dry chambers	2 x 100 m ³
Steam chambers	4 x 70 m ³
Production hall (empty)	60 meter x 100 meter
Profile mill (empty)	150 meter x 100 meter

Financing

At the start of the bankruptcy proceedings, the main creditors included: HEP (electricity utility) with debts of USD 42,500, HBOR with USD 1,226,000 and the Municipality of Donji Lapac for an additional USD 84,000 in communal fees. However, the bankruptcy manager, with the approval of the Karlovac trade court, has written off most of the HBOR, HEP and municipal debts due to the corporate fraud conviction.

In addition, the manager admitted that the facility will probably be sold for as little as USD 60,000, which will be enough to settle the majority of the remaining debts as well as cover the costs of the bankruptcy court proceedings.

Ownership Structure

The company is currently in bankruptcy. At present, all assets and property are in the complete control of the bankruptcy manager. The previous owner, convicted of fraud, has no claims on the existing assets.

Recommendations

The complex at Lapac is of such size and complexity, and in such a state of disrepair due to obsolescence, looting and war damage, that it is not viable to re-start any portion of production without significant levels of maintenance and capital investment. At this level of cost for re-start, it places Lapac well beyond the scope of the FI Level I or Level II initiatives. In FI's view, a realistic assessment of potential production levels based on this investment do not support a decision to invest substantial resources into the facility.

There is no future for Donji Lapac at either Level 1 or Level 2 operations, taking into account the costs for refurbishment and start-up. The cost of putting the existing machines into operation with minimal modernization and modifications would be at least \$300,000. This, however, would not solve numerous production problems related to the asset stripping and lack of maintenance. There are also the problems associated with the boiler, steaming chambers, kiln driers, etc. Furthermore, as the factory complex is unnecessarily large, the utility costs and municipality taxes would be significant operational burdens. FI estimates that, including asset purchases and working capital requirements, an initial investment of over USD 800,000 will be required to bring the facility back into operation.

Regardless of the above, FI recommends that the bankruptcy court transfer the assets into private ownership as soon as possible through a "best-offer" bidding process. This is currently in progress, and the bankruptcy court trustee is working to secure a buyer. The existing assets can be used for other sources of production, based on the needs of enterprises in the area. However, due to their dilapidated state, it is not anticipated that there will a large demand for the existing assets or production hall.

Recommended Initiatives for Donji Lapac

Level I

Activity	Objective	Result
No action recommended since there is no possibility of commercial activity without significant investment		

Level II

Activity	Objective	Result
No action recommended since there is no possibility of activity without significant investment		

Level III

Activity	Objective	Result
No action recommended since there is no possibility of activity without significant investment		

3.4. Šamarica – Dvor na Uni

Šamarica - Dvor was a fully integrated wood products facility, specialized in elements and parquet production in both beech and oak. It also had a furniture plant with lacquering facilities. The company started in 1963 and steadily expanded its operations and was financially successful up to the pre-war period.

The property is a vast complex of approximately seven hectares, and the buildings range in state of repair from fair to poor. The exception is the boiler house, which was new in 1988 and it includes two large boilers that are in good condition. Post war and post privatization production started in September 1999 and ceased in May 2000.

The company was privatized in 1999 by the CPF to a single shareholder, Mr. Grga Cambur, who has a contractual obligation to pay the total purchase price in three installments. He paid the first such installment in December 1999, however he is now in default to the CPF, and additionally owes the employees in labor wages and also municipal utilities. Further, there was a third party guarantee to the HS, which has been called, due to non-payment by the owner. Due to lack of working capital and poor management, the kiln driers and the parquet line have not operated since 1994. The production has been completely stopped since October 2001.

During the initial interview with the majority owner, Mr. Cambur, he explained that operations would start again in a week or two (early May 2002), but there were no logs in the yard. At least a one-week supply of logs should be in the yard before the sawmill production begins. As of 10 June 2002, production had still not begun, nor have logs been ordered. According to the municipal officials, Cambur has promised to begin production for the last 12 months with no results.

Raw Materials

The quality and quantity of the hard wood raw materials in the region is adequate. There is a significant proportion of heart wood in the local beech logs, but not as large as in Lika region forests. The forests are easily accessible and the other producers in the region are of moderate capacities, and thus the competition for acquiring the logs is not problematic. Hrvatske šume requires reliable producers in this region to exploit the forests.

In the local area, the log mix is 60% beech, 40% oak. However, before the war, the company specialized in beech processing. The company manufactured 13,000 m³ of beech elements in 2000 and 2,000 m³ of beech elements in 2001.

Products and Markets

The best quality of unedged planks could be sold to the Italian markets. The fixed dimension lumber could be sold either to Italian or Croatian markets. The sawmill could switch from making fixed dimensions to making edged beech wood planks for the Egyptian market. The situation in the wood markets is changing from time to time and the profitability of selling to one market, in general terms could decline.

In order to meet changing demands, the refurbishment of steaming chambers is required. During the summer the Italian market is effectively closed and therefore the HS pressures sawmills to continue to consume quantities of logs, which generally are processed for the Egyptian market.

Type of Production	Market
High quality unedged	Italy
Edged beech	Egypt
Elements	Italy, Croatia

It would be advantageous, assuming that a production restart were to begin, to negotiate a multi-year contract for logs with HS before re-starting production. There is the possibility to obtain favorable contractual and payment terms from HS, since the company is located in a war-affected area. It is important to the HS that a local processor begin utilizing the wood assets in the area, which are beginning to show signs of increasing age, which will reduce the forest's value in the long term.

Human Resources

The company previously employed approximately over 450 workers and the town has no other large employer. Unemployment is high and there is expected to be no problem in finding skilled workers. During the last production cycle in 2001, 44 workers were employed. This is expected to remain constant at the proposed levels of production. If the flooring production were fully operational, the company would need about 65 workers.

Technology and Equipment

The sawmill is a Bratstvo 1400 and seems to be in functional condition. The capacity in present repair is 60 m³ in one shift. In the secondary products phase, the capacity is 16 m³ of elements per shift. Unfortunately, the current layout situation precludes cost-effective parquet-flooring production, which uses special thin diameter logs at a much lower price.

The Schroeder line for flooring production is old and needs modifications to allow for larger widths in parquet. The line is in reasonable working condition and this flooring machine could process about 500 m² of wood in one shift.

There are two boilers with capacities of 8 T/hr and 12 T/hr, which is far too much for the level of production anticipated under current conditions. One boiler could and should be sold to raise working capital.⁶ There is also woodworking machinery that could be sold from the idle furniture production facility.

The kiln drying facility is not functional and the flooring production cannot start without drying chambers. They are of an old design and would be inefficient to operate. The sawmill requires a complete overhaul. The boilers are in good repair, however, this power source is well removed from the manufacturing plants and the size of the system would require full capacity operations in order to steady-state the power system. This would be very expensive in terms of energy consumption. The cyclones and silos and other parts of the fuel (wood) supply system is over-designed for a scaled down re-start of operations. The balance of the operations will require a reconfiguration and refurbishment.

⁶ FI received a quote for the boiler of USD 40,000 from a local wood processing equipment specialist, however the current "owner" is not aware that he can sell the boiler to raise working capital.

Equipment	Quantity
Sawmill 35,000 m ³ / year	Band Saw Re-saw Frame saw (not functioning)
Parquet line and supporting equipment	1 x Schroeder line
2 machine shops with spares and blade sharpening facilities	Standard equipment and parts
Boiler house with 2 boilers, both wood fired with coal back-up	1 x 8 T/hr 1 x 12 T/hr
Elements factory	2 cross-cutters 2 edgers 4 band saws
Kiln drier chambers	4 x 50 m ³ capacity
Steaming chambers	4 x 10 m ³ capacity
Pre-dry chambers	6 x 100 m ³ capacity

In order to increase sales and profitability, there should be an edging machine for longitudinal cut (not cross-cutting width cut) after the sawmill. Production of more unedged planks of lower quality, will allow the band saw to run at higher capacity and not to be subject to the bottleneck of the processing capacity of the secondary phase for elements.

Financing

The current level of total outstanding debt for the company is USD 295,000:

USD 183,000	-	to “friend” for a Hrvatske šume guarantee ⁷
USD 49,000	-	Croatian Privatization Fund
USD 25,000	-	unpaid worker salaries
USD 10,000	-	transport costs for log deliveries
USD 16,000	-	electrical utility
USD 12,000	-	municipality communal fees/taxes

Ownership Structure

The Croatian Privatization Fund (CPF) sold the company to Mr. Grgo Cambur in 1999, with an agreement for payments in annual installments. The first payment was made, however the second and third payments, each for USD 69,500, have not been paid. During the second week of April, Mr. Cambur had talks with the CPF and he claims that there was an agreement with the CPF to pay USD 49,000, in order to keep the privatization arrangement in place. However, Mr. Cambur has reneged on that agreement as well. In discussions held by FI with the CPF individual responsible for the Dvor facility, the CPF indicated reluctance to “reassume” control of the facility, particularly in the absence of another operator.

⁷ Apparently, Mr. Cambur had insufficient working capital to purchase logs from HS. In these cases, HS demands a guarantee to ensure that, after 60 days, it will be paid for the logs. In this case, a “friend” of Mr. Cambur provided the guarantee of USD 183,000 for logs, which was called by HS when Cambur did not pay. This friend is now actively searching for a way to force Mr. Cambur to pay this debt.

Potential Partners/Buyers

The production at Dvor could be configured to manufacture oak elements and flooring. A strategic partner could possibly be found at a relatively low participation cost, if the CPF would cancel the arrangement with Mr. Cambur due to non-payment and transfer the same rights to a new owner.

Recommendations

FI recommends that the CPF should take immediate measures to secure control of the facility and to eliminate Mr. Cambur from the ownership of the company due to his non-payment of the acquisition-related debt. The current owner is not anticipated to be able to secure necessary financing to repay his significant debts, much less restart production at the facility. The CPF should then begin an immediate search for another owner with the financial means to restart production and pay the CPF for the facility. In any case, a goal of the CPF should be to transfer the asset to productive private ownership, after first determining that the potential new owners have the managerial and technical backgrounds, as well as the financial means, to operate (and pay for) the facility.

If the GoC directs the CPF to repossess the facility or the CPF, following its normal procedures, repossesses the facility, FI recommends that technical assistance be provided to CPF. Although most repossessions are re-privatized via share sales, the CPF could consider issuing a tender to locate new ownership to restart operations. USAID's privatization consultants (PWC) would, as with any other tender privatization case, actively participate in the preparation of the tender and help CPF with investor outreach and due diligence, as appropriate. This will require the development of a full business plan outlining production possibilities to potential investors and/or strategic partners. Significant "outreach" activities will be necessary in order to attract interested parties in reviewing the facility, including the development of a marketing and production plan for the facility.

The company is a viable target for acquisition under the same terms and conditions as established for Mr. Cambur. The facilities are in reasonably good order for production, with everything tested and in working order. Certain equipment can be sold to raise additional working capital. The second boiler should be sold, as it is not needed for anticipated production levels.

Recommended Initiatives for Šamarica – Dvor

Level I

Action	Objective	Result
Sell all finished goods in inventory	Raise cash from the sale of 300 cubic meters of parquet and elements	Apply revenues to working capital and acquire raw materials and repair equipment
Negotiate supply agreement for oak logs from the HS	Obtain cost-effective reliable source of raw materials to utilize the sawmill, the kiln driers and the elements and parquet machinery	Reliable supply chain and feasible terms and conditions
Choose appropriate level of employment to satisfy	Establish management team and production team to suit the	The Turnaround Plan will dictate the level of direct labor

production and meet sales projections according to FINPRO analysis	Turnaround and start-up plan	and overheads in order to meet realistic sales projections for elements and parquet
Establish configuration of all existing equipment and facilities to meet the sales projections	Re-start appropriate existing equipment with minimum maintenance and repairs	Air-dried, unedged planks will be kiln dried, edged and cut into elements for manufacturing of parquet or sales of elements

Level II

Action	Objective	Result
Establish agreement with HBOR, HGA, DCA or other guarantee agency to arrange for bank loans and loan guarantees	Devise and implement an investment plan which includes complete refurbishment of equipment, boiler and computerization of kiln driers	The operations of the company would be returned to the intended outputs and capacities with associated revenues and profitability
Establish long term export sales contracts for export products and cooperate with HBOR for credit insurance and other export agency instruments	Take advantage of all facilities offered from HBOR export credit agency in order to secure financing of export sales	Receivables from international buyers will be guaranteed and factored
Pursue cooperation with all available international agencies, such as the World Bank, IFC, UN, UNHCR and all NGOs	Gain all possible benefits from international donor community	Technical assistance, municipal programs and related regional programs will gain synergy and provide financial benefits
Implement management performance improvements	Impart western standards of financial controls and other management skills	Adherence to improved business practices will gain higher returns and sustainable operations

Level III

Action	Objective	Result
Present a strategic plan and investment plan to IFC, SEAF, SEEF and various PIFs in Croatia, in order to sell an equity position to national or international partner	Develop a FINPRO which includes a five year strategic plan for full integration and expansion of certain capacities for a balanced output of high quality finished goods based on the current platform of manufacturing	Equity or debt financing is secured of a sufficient level to begin faculty refurbishment for restart.
Determine if the company can offer a strategic fit for a foreign or national investor, based upon the Level III business and marketing plan	Sales projections and cash flows will confirm the viability of the business plan and the benefits for the strategic investor	Equity or debt financing is secured of a sufficient level to begin faculty refurbishment for restart.

3.5 DIP Majur, Kostajnički Majur

Background and Current Situation

DIP Majur previously produced doors, windows and several specialty items including engineered kits of complete wooden staircases as well as parquet floorings. The company worked 90% in oak, which is a distinct market advantage. Majur was privatized to employees and refugees through vouchers and restitution. HBOR and certain creditors also held a portion of equity. The company has been under the control of the Zagreb bankruptcy courts since January 2001.

The company has been non-operational since November 2000. There is a small staff overseeing the property and selling the remainder of the parquet and elements inventory. The Zagreb bankruptcy court has appointed these workers. The court has assessed a value of USD 1.125 million to the land and buildings and USD 250,000 for the equipment. This was done for the purpose of holding a public auction with the intent to sell the entire company as a package. The valuation of the property seems accurate, however the equipment valuation (in the FI team analysis) is approximately 30% lower than market value.

Raw Materials

The last production cycle, in 2000, was utilizing primarily oak (90%) from the Sava river basin, which is of adequate quality. Since its privatization, Majur lost working capital due to poor marketing and staffing decisions. The company was unable to pay for logs on time and eventually the low quality of logs received did not allow for profitable production.⁸ With sufficient working capital, 25,000 m³ of high quality logs could be acquired for proper production. Thinner diameter logs could also be efficiently used for flooring production by utilizing the frame saw.

Products and Markets

Majur could produce oak sawn lumber for the Italian and Egyptian market in standard dimensions. There has been strong demand during the last few years. The quality of the Majur classic style parquet flooring was traditionally very good, often exceeding the quality levels of other Croatian suppliers.

There is also a production hall for wooden staircase kits, which is the only one in Croatia. Markets exist for flooring in Denmark, Germany, Benelux and Italy. For a re-start the focus should be on semi-finished products, as the lacquering facility was destroyed in the war.

Type of Production	Market
Oak lumber	Italy
	Egypt
Flooring	Croatia
Wood staircases	Denmark
	Germany
	Benelux
	Italy

⁸ HS, in response to late or non-payment, usually reduces the quality and quantities of log sold to struggling processors, further compounding their financial and marketing problems and often directly leading to collapse.

DI Turopolje in Velika Gorica, until recently the largest producer of similar products in the area, went into bankruptcy in March 2002. There is therefore a vacant position in the domestic oak wood market to exploit. Turopolje was the most famous oak producer in the region, however its new owner had no knowledge of the wood business and significantly mismanaged the operations, resulting in bankruptcy.

Human Resources

Workers were skilled and experienced, with a number of wood products engineers in the region. Traditionally however, there has been an excess of management and administrative employees in the company. It is estimated that within the pre-war employment level of 450 workers, 150 were in administrative positions. Over-employment contributed to high operating costs and resulting losses, which further resulted in a lack of working capital.

Technology and Equipment

The machines in the sawmill are in very good condition, since a major overhaul was completed on the band saw and carriage just before production was halted. The second line is a frame-saw (Esterer) from 1958, also recently overhauled and in good working condition. All the machinery in the primary and secondary phases of the sawmill could be re-started without significant maintenance or costs.

The facility has three production lines from Weining and Schroeder, two for classical parquet flooring and one for industrial flooring. The capacity of classic lines is about 500 m² per shift and industrial about 200 m².

The boilers are TPK 13 T/hr and 10 T/hr. One is enough for near term production levels. They are both in good operational condition. There are six drying chambers with capacity of about 300 m³, in working condition, but without computerization.

Equipment	Quantity
Sawmill	1 Band Saw and carriage (1978) 1 Re-saw 2 Cross-cutters 1 Edger
Parquet factory and 4 x parquet production lines	Up to 70 mm width with 100 cm length
Coating line for parquet	Bukle system
Staircase factory	1 Star wheel press 2 edge molders 1 hot press (3 platens, 2m x 1m) 1 finger-joint line
Elements factory	1 five-head edger 4 cross-cutters 1 single-head edger
Dry kiln chambers (obsolete)	6 x 50 m ³ capacity
Dry kiln chambers (need repair)	6 x 50 m ³ capacity
Pre-dry chambers	6 x 100 m ³ capacity

Financing

The total debt level at the time of bankruptcy was USD 2,240,000.⁹

Primary creditors include:

HBOR	-	USD 1,977,000
Hrvatske šume	-	USD 124,500
Croatia Osiguranje (insurance)	-	USD 41,000
Health Fund (HZZ)	-	USD 42,000
Retirement Fund (MORH)	-	USD 12,000
Ministry of Finance	-	USD 20,000
Workers wages	-	USD 21,000

According to the bankruptcy court manager, a large portion of this debt is not expected to be recovered from the eventual sale of the facility. This may result in a potential sales price much lower than the actual market value of the facility.

Ownership Structure

Majur was privatized to employees, veterans and war refugees through vouchers and restitution, with additional equity also held by the HBOR and other creditors. The company has been under the control of the Zagreb bankruptcy courts since January 2001. Therefore, the shareholders no longer have any say in the disposition of the company or any enforceable financial interest; the Zagreb Bankruptcy Court is in full control of the facility.

Potential Partners/Buyers

As of April 2002, six potential buyers have visited the factory, including some foreign interests. Taking into consideration the equipment and asset valuation and the general condition of the factory, the company would be an attractive candidate for an interested party.

Recommendations

FI recommends that the Zagreb bankruptcy court transfer the asset to private ownership as soon as possible. As the facility is relatively undamaged and has significant production potential, Majur is a candidate facility for acquisition by an equity investment fund or any potential strategic partner active in the wood processing industry. The production of more sophisticated products is achievable with a modest reasonable additional investment, unlike the other companies surveyed, which require significant investment to approach even primary production. FI recommends that limited technical assistance be provided, on behalf of the court and in the interest of the municipality residents, to the facility to locate new ownership and to secure necessary debt or equity financing to restart operations.

⁹ Obviously this is not significant in terms of the bankruptcy proceedings, except that the debtholders would prefer to see the sales price in excess of the debt levels.

This company is in the best position among all companies investigated. Assuming an ownership transfer, the company currently needs only working capital to begin production, as all processing equipment is well maintained and in good repair. It is recommended however to reconfigure the current equipment and apply efforts to a selected market niche. Based on selected product mix, the company can feasibly work with a Level I investment (loan) with 5-6 years maturity. An initial working capital installment of USD 200,000 is readily justifiable for this company based on long-term revenues. As with all previous companies, this firm must operate in two shifts. It would be advantageous to negotiate a multi-year contract for logs with HS before re-starting production.

Recommended Initiatives for Majur

Level I

Action	Objective	Result
Sell all finished goods inventory	Raise cash from the sale of 700 cubic meters of parquet and elements	Apply revenues to working capital and acquire raw materials and/or repair equipment
Negotiate supply agreement for oak logs from the HS	Obtain cost-effective reliable source of raw materials to utilize the sawmill, the kiln driers and the elements and parquet machinery	Reliable supply chain and feasible terms and conditions
Choose appropriate level of employment to satisfy production and meet sales projections according to FINPRO analysis	Establish management team and production team to suit the Turnaround and start-up plan	The Turnaround Plan will dictate the level of direct labor and overheads in order to meet realistic sales projections for elements and parquet
Establish configuration of all existing equipment and facilities to meet the sales projections	Re-start appropriate existing equipment with minimum maintenance and repairs	Air-dried, unedged planks will be kiln dried, edged and cut into elements for manufacturing of parquet or sales of elements

Level II

Action	Objective	Result
Establish agreement with HBOR, HGA, DCA or other guarantee agency to arrange for bank loans and loan guarantees	Fulfill an investment plan which includes a complete refurbishment of equipment, boiler and computerization of kiln driers	The operations of the company would be returned to the intended outputs and capacities with associated revenues and profitability
Establish long term export sales contracts for glue/lam boards and cooperate with HBOR for credit insurance and other export credit agency instruments	Take advantage of all facilities offered from HBOR export credit agency in order to secure financing of export sales	Receivables from international buyers will be guaranteed and factored
Pursue cooperation with all available international agencies, such as the World Bank, IFC, UN, UNHCR and all NGOs	Gain all possible benefits from international donor community to cooperate with the overall objective of the FI project	Technical assistance, municipal programs and related regional programs will gain synergy and provide financial benefits

Implement a consulting agreement and gain support for management performance improvements	Impart western standards of financial controls and other management skills	Adherence to improved business practices will gain higher returns and sustainable operations
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Level III

Action	Objective	Result
Present a strategic plan and investment plan to IFC, SEAF, SEEF and various PIFs in Croatia, in order to sell an equity position to national or international partner	Develop a FINPRO which includes a five year strategic plan for full integration and expansion of certain capacities for a balanced output of high quality finished goods based on the current platform of manufacturing	Equity or debt financing is secured of a sufficient level to begin faculty refurbishment for restart.
Determine if the company can offer a strategic fit for a foreign or national investor, based upon the Level III business and marketing plan	Sales projections and cash flows will confirm the viability of the business plan and the benefits for the strategic investor	Equity or debt financing is secured of a sufficient level to begin faculty refurbishment for restart.

3.6. DI Papuk, Pakrac

Current Situation

DI Papuk specialized in hardwood elements and flooring before the war and was one of the larger facilities in the area. There is a modern elements factory with large capacities on built along two production lines. The equipment for the elements factory was installed, new, in 1992. The company works mostly in beech, however oak is also available as a raw material. The company is operational and is currently building significant inventories of elements and flooring components. The company is failing to meet its debt payments, other than to the HS for the log supply. The company owes the workers over 10 months of wages and owes HBOR and DAB a total of approximately USD 1.2 million. The company was functioning during all the FI site visits; however, there was no evidence of the kiln drying chambers being utilized. The sawmill and elements factory are on one shift / five days and the parquet line is on two shifts / five days. The work-in-process inventory was staged in many locations, including inside the idle kiln driers. The CPF holds 86 % of the company.

The company is well regarded by the local authorities and they will be very flexible and cooperative about potential solutions to continue operations. The current senior management is politically appointed and non-effective in a commercial sense. The company has very little sales activity and very large production activity, which is consuming all working capital. This is a result of lack of marketing knowledge, particularly as the company is producing beech floorings, which cannot be sold at a price above their production cost under current market conditions.

The current levels of inventories are as follows:

Beech logs	600 m3
Unedged beech planks air-drying	800 m3
Elements in storage sheds	400 m3
Elements air-drying	600 m3
Floor/elements KD in storage sheds and kiln chambers	800 m3
Finished parquet	600 m3

A conservative reduction of this estimated total and a conservative average selling price of such inventories places a minimum value of USD 500,000 on these wood products. The level of inventory must be monitored closely if bankruptcy procedures begin. The company requires long-term sales contracts or off-take agreements. The company can raise sufficient working capital by reducing its inventories and practicing financial controls.

Raw Materials

Papuk is located in a very rich forest region and the HS stated that Papuk could continuously purchase about 30,000 m3 of logs, of which 24,000 m3 would be beech and 6,000 m3 would be “kitnjak” oak, a lower quality than the Slavonian oak. The beech from the region is of excellent quality, being very white and clear.

Over the past two years, the supply of raw materials was sporadic, due to the company’s inability to pay on time (see related footnote). For this reason, the quality of the logs sold to Papuk was and is at the low end for the region. Due to its debt payment problems, Papuk must make advance payments to the HS, although the wood processing facilities in war affected regions usually have payment terms 60 days from the date of invoice. There is also strong competition from the nearby sawmills, trying to secure larger quantities of logs.

Products and Markets

Currently, the majority of production is unedged and edged beech wood, as well as fixed dimensions in beech wood. All the products are of standard type and size and could be sold to a number of potential customers. There is large production capacity for elements production in fixed dimensions. Since elements production is labor intensive, full capacity operations could absorb surplus workers from the sawmill.

Production would allow for the processing of oak as well. There is a market demand for oak that exceeds the supply at present. Papuk also has capabilities for producing parquet flooring. However, due to the current low quality of the raw materials, this flooring is unattractive for the market.

The unedged and edged beech from better quality logs could be sold in Italy, with lower quality going to Egypt. Steaming chambers are needed to produce for the Egyptian market. Beech elements could be sold in Italy as well as in Croatia depending on the dimensions demanded.

All production of oak could be sold anywhere at the moment, due to the current high demand on the European market (Italy, Austria, Benelux, France). The flooring production should concentrate on kitnjak oak, which could be sold in France and UK. However, the dimensions would have to be changed to meet the taste and demand of the market. Additional income could be earned by leasing the drying chambers, which was previously done. The company will need significant technical assistance to help with the development of a product-marketing strategy.

Type of Production	Market
High quality edged and unedged beech	Italy
Lower quality edged and unedged beech	Egypt
Beech elements	Italy, Croatia
Oak products (all)	Italy, Austria, Benelux, France
Oak flooring	France, UK

In general, this company is in a good position due to intact production capacities and the resulting product mix. The equipment is well maintained and is currently in operation. Current market prices for oak species wood products can enable the company to operate profitably, for contracted customers. After bankruptcy, the new owners of the company must balance production and reduce the accumulation of inventories. Regarding beech species products, the company faces the same market problems as other companies with only a beech wood product mix. Oak production will provide a key short-term competitive advantage.

Human Resources

Traditional knowledge and expertise were key factors in Papuk being one of the largest and best-known exporters of chairs in the former Yugoslavia. Exports during the pre-war period (1989) totaled about 10,000,000 USD per year. The primary markets were USA, UK and Germany. The workers have a long history (over 100 years) of sophisticated products.

Today there are 160 workers, over 100 of which are former Croatian soldiers who will probably resist being laid off, or may oppose foreign ownership. Due to the continuing non-payment of salaries and an uncertain future, there are very serious morale problems, leading to poor quality in production.

For the anticipated production levels, only 90 workers would be needed, leaving an excess of 70 workers. A wood factory with this level of surplus employees cannot function profitably or efficiently.

Technology and Equipment

The sawmill is of an old design, with commercial goods proceeding in one direction and the unsorted going in another, within a large sorting hall. This line is functional, but it is designed at 35,000 m³ per year and the plant is cutting at only 20,000 m³ annual rate, which is inefficient. Both cranes are operational with one dedicated for logs and the other for sawn timber. Many machines were overhauled after the war.

Equipment	Comments
Sawmill (35,000 m3 capacity)	2 band saws and carriages 1 re-saw 3 cross-cutters 1 frame saw
Cranes (Aumund-German)	1 for logs to sawmill 1 for lumber to air dry yard
Bratstvo 1400	2 units
Bratstvo 1500	1 unit
Saw repair and sharpening shop	Standard equipment
Boiler (TPK) (one functioning and two obsolete)	9.5 MW (2 units) 2.5 MW
Kiln Dryers	4 x 200m3 1 x 100 m3
Flooring factory (parquet)	3 Schroeder lines 1 Ledinek line (Slovenian copy of Weining)
Electric generator	steam powered, obsolete
Elements Factory	2 rough edgers 4 cross-cutters 4 edgers 12 small band saws
Dry kiln chambers	6 x 50 m3
Covered storage areas	4 x 500 m2
Buildings in disrepair but closed	3 x 400 m2
Buildings destroyed during the war	4 x 500 m2
Railroad trunk lines	2 spurs connected to the main railroad lines running to Kutina

There is one working boiler and the others are damaged, but the capacity is enough for current production. The current drying chambers were represented as being a total of 900 m3, which is down from 1,500 m3, before the war.

Currently there is not enough raw material flow (or sales) to support a second shift in elements. There is also not enough market demand to justify operating the flooring production, however, it is running on two shifts to utilize the recovery materials from the elements factory.

Financing

The financial situation at present is very challenging as the outstanding debt is approximately USD 3,257,300. The accounts of the company are frozen and the assets are fully collateralized. For turnaround, a sophisticated debt renegotiation agreement would need to be arranged with all parties. Additional working capital of at least USD 500,000 is needed (200,000 could possibly be in the form of a bank guarantee to Hrvatske šume, USD 100,000

to upgrade semi-finished products and USD 200,000 for other operating expenses). An even larger amount of working capital would be needed if there is no factoring of receivables available from a broker.

The current senior management has put together an investment plan calling for additional loans of USD 1.1 million and forgiveness of 2.1 million in debts. However, FI's analysis of this plan shows that there is no realistic hope of operating at a profit while continuing to make the debt service payments.

Ownership Structure

The Croatian Privatization Fund (CPF) currently owns 86%, with the remaining portion held by minority shareholders. CPF will release a tender on the Zagreb stock exchange for the company's sale in late June, unless the courts rule in favor of bankruptcy. The company is over 60 days in arrears of debt payments and technically qualifies for bankruptcy procedures.

Potential Partners/Buyers

As noted above, the majority of the employees are former Croatian soldiers. They would likely resist anyone new entering the company as owner, unless there was a proven track record and a guarantee that the new owner would not strip assets and abandon the company.

FI has contacted three companies in the area that have expressed interest in the facilities, but all of them stated that it would be cheaper to purchase the company after the forthcoming (in their view) bankruptcy proceedings have been completed, due to the high level of debts. The managers themselves could initiate the bankruptcy procedure, but are reluctant to do so if a quick re-start of the facility under new ownership cannot be guaranteed.

Spin Valis, Požega - Was willing to take over the company one year ago, but under the condition that there would be no debt and no mandatory need to maintain the (high) workforce levels. Spin Valis is a private company producing about 12,000,000 USD of furniture and wood products, primarily for export. It is completing two new facilities (chair factory and solid wood boards factory) at their location in Požega.

Tvin, Virovitica - The largest Croatian woodworking and furniture company, producing primarily for IKEA. They took over Gaj, Pitomača and it is now working normally. Tvin would likely be able to organize normal production in Papuk.

DI Brestovac, Garešnica - A relatively large, privately owned company from the region with a large number of shareholders, producing furniture, flooring, and sawn timber and is establishing a factory for the production of chairs.

Recommendations

FI recommends that the CPF immediately undertake measures to begin a bankruptcy procedure on the facility. As the Pakrac facility is operating at such a high level of inefficiency due to excess workers, and has such a high level of debt (to banks, suppliers and workers), FI believes it is not viable to continue to operate the facility without a formal move into bankruptcy followed by small levels of capital investment. Considering that the outstanding debt is USD 3,257,300 and the facility has additional burden of over 60 surplus workers, bankruptcy is the most feasible alternative at present for resolving these two issues and continuing production under new ownership.

The current senior management has put together an investment plan that calls for additional loans of USD 1.1 million and forgiveness of 2.1 million in debts. However, FI's analysis of this plan shows that there is no realistic hope of operating at a profit while continuing to make the debt service payments. The CPF apparently agrees, as it has decided to offer the company for sale by a public offering on the Zagreb Stock Exchange (ZSE) at a fraction of nominal value. This is usually an acceptable method of privatizing facilities currently in operation. However, the danger exists here that a speculative investor may buy the facilities, liquidate the considerable assets (USD 500,000 in processed wood alone) and shut down the company without servicing the debt.

The CPF has made its decision and it will remain to be seen what decisions the new owner will make about asset disposal, debt repayment and other issues.

Recommended Initiatives for Pakrac

Level I

Action	Objective	Result
Sell all finished goods in inventory	Raise cash from the sale of the total cubic meters of parquet and elements and lumber	Apply revenues to working capital and acquire raw materials and/or repair equipment
Negotiate supply agreement for beech and oak logs from the HS and seek partnership with customers for prepayment terms	Obtain cost-effective reliable source of raw materials to utilize the sawmill, the kiln driers and the elements and parquet machinery	Reliable supply chain and feasible terms and conditions with advance payments from customers
Choose appropriate level of employment to satisfy production and meet sales projections according to FINPRO analysis	Establish management team and production team to suit the Turnaround and start-up plan	The Turnaround Plan will dictate the level of direct labor and overheads in order to meet realistic sales projections for elements and parquet
Establish configuration of all existing equipment and facilities to meet the sales projections in a more market driven and customer oriented sales plan	Utilize existing equipment with minimum maintenance and repairs	Air-dried, unedged planks will be kiln dried, edged and cut into elements for manufacturing of more marketable forms of parquet or sales of fixed dimension elements

Level II

Action	Objective	Result
Establish agreement with HBOR, HGA, DCA or other guarantee agency to arrange for bank loans and loan guarantees	Fulfill an investment plan which includes complete refurbishment of equipment, boiler and computerization of kiln driers	The operations of the company would be returned to the intended outputs and capacities with associated revenues and profitability
Establish long term export sales contracts for glue/lam boards and cooperate with HBOR for credit insurance and other export credit agency instruments	Take advantage of all facilities offered from HBOR export credit agency in order to secure financing of export sales	Receivables from international buyers will be guaranteed and factored
Pursue cooperation with all available international agencies, such as the World Bank, IFC, UN, UNHCR and all NGOs	Gain all possible benefits from international donor community to cooperate with the overall objective of the FI project	Technical assistance, humanitarian assistance, municipal programs and related regional programs will gain synergy and provide indirect financial benefits
Implement consulting or management agreement and gain support for management performance improvements	Impart western standards of financial controls and other management skills	Adherence to improved business practices will gain higher returns and sustainable operations

Level III

Action	Objective	Result
Present a strategic plan and investment plan to IFC, SEAF, SEEF and various PIFs in Croatia, in order to sell an equity position to national or international partner	Develop a FINPRO which includes a five year strategic plan for full integration and expansion of certain capacities for a balanced output of high quality finished goods based on the current platform of manufacturing	Equity or debt financing is secured of a sufficient level to begin faculty refurbishment for restart.
Determine if the company can offer a strategic fit for a foreign or national investor, based upon the Level III business and marketing plan	Sales projections and cash flows will confirm the viability of the business plan and the benefits for the strategic investor	Equity or debt financing is secured of a sufficient level to begin faculty refurbishment for restart.

4. General Conclusions:

The FI analytical team believes that a number of conclusions are warranted from the situation presented by these six companies.

First, all of the companies suffer from obvious common problems including, among others, catastrophic war damage, wastage or loss of assets, and bankruptcy, which make a return to economic health (if, indeed, some were ever economically healthy) highly problematic.

Second, even those that show some evidence of viability as discrete operating entities – Vojnic, Dvor, and Majur - still suffer from uncertainty and unpredictability arising from ownership and control issues. Until these issues are resolved, a clear path forward for these companies is hard to see. These issues must be resolved by the CPF and the Croatian bankruptcy court system.¹⁰ This makes recommendations for further action highly problematic both for the donor community and private sector investors alike.

Third, a combination of the above factors, as well as corruption and a government lack of interest in the war-affected areas, has created a situation in which the majority of wood processing in the ECRA area has come to a halt. It is not within the scope of this report to address the larger issues behind this general collapse.

Conclusions and recommendations relating to each of the six companies that are the subjects of this analysis have been summarized in each of their respective sections. In sum, FI recommends that, before any meaningful action can take place to turnaround these companies or otherwise make efficient use of their assets, all the companies be turned over by their respective present owners or others in effective control – whether the CPF, bankruptcy courts, other owners or banks - to the private sector as soon as possible by:

- Initiating bankruptcy proceedings and disposing of assets through liquidation to private buyers (Pakrac, Gvozd)
- Follow through on proceedings already initiated and sale of the company as a whole or liquidation of individual assets to private buyers (Vojnic, Donji Lapac)
- Sale of the company as a whole to a new owner, preferably one with necessary resources to restart production as well as experience in the industry and the intention to resume operations, after development of outreach and business planning activities on behalf of the facility, as needed (Dvor, Majur)

Apart from conclusions drawn on individual companies, FI believes it should draw attention to another issue arising out of this analysis that donors may want to be aware of as a channel for possible future action:

Other Potential ECRA Action for Assets in the War-affected Areas:

Like these six wood producing companies, many of the smaller, state-owned companies in the war-affected areas never entered or never finished any process that resulted in their transfer into private ownership. Currently there are over 65 abandoned warehouses, former production facilities and other intact buildings in the ECRA areas that are standing idle.

¹⁰ Recently the Croatian government announced measures to support a speedy transfer of CPF-owned non-performing assets into bankruptcy, as well as measures to streamline the bankruptcy court procedures. It remains to be seen when and if these measures will be implemented.

These assets are deteriorating further each day due to neglect and looting, while confusion reigns on the part of the government over the ownership and legal status of the original, socially-owned enterprises that previously held title to the assets.

FI recommends that steps be taken to resolve the ownership status of these potentially useful assets so that the local communities can benefit from their return to productive use. Although some of these facilities cannot be utilized due to significant war damage, a number of them might yet be converted to productive use by local residents. A precondition for this to happen is that their legal status be resolved so that the assets can be transferred to private ownership, where they can be used for production purposes. Combined with other assets to enhance production, the facilities can potentially be used as collateral for bank loans.

An existing FI project in the ECRA municipality of Donji Lapac provides a case in point of how this could be achieved. FI personnel and consultants have coordinated extensively with the Croatian Privatization Fund (CPF), the Karlovac Trade Court, as well as the Office for State Property (OSP) in Zagreb in an effort to resolve the ownership situation of a number of assets in the municipality, including an abandoned hotel and a warehouse. Because of a lack of government capability and interest in determining the ownership status of these assets, none of these organizations was aware that various assets in Donji Lapac were in a state of legal “limbo”.

FI procured documents from the Commercial Court in Karlovac stating that, following the liquidation of the state-owned enterprises that owned the assets; the ownership of the facilities would transfer to the Croatian State. However, as the Court did not specifically confirm either the CPF or the OSP as the new “owner,” neither institution was able (nor motivated) to act. After a meeting organized by FI representatives with officials from both institutions, they determined that a decision from a government commission would be necessary to resolve the situation.

Based on FI’s request, a Croatian government commission that resolves these types of issues between ministries will discuss this topic at their next meeting. As a result, we expect a decision will be made by the government before the end of June 2002 to prepare the assets for transfer to private ownership. This decision is likely to be either to initiate a public tender for the assets or announce an auction process that ideally will transfer the assets to private ownership after more than five years of post-war liquidation

Related to this effort, FI is currently providing the Lika Agricultural Cooperative in Donji Lapac with technical assistance to facilitate the development of a Cooperative-owned cheese processing facility. With FI support, the Cooperative intends to respond to this forthcoming tender offer with the goal of procuring a building for use as a cheese production facility. This will substantially reduce the necessary expenditure for the development of the cheese factory, and will potentially provide an asset for the Cooperative to use as the basis for a collateralized bank loan.

FI recommends that this type of technical assistance be provided in other affected ECRA municipalities, particularly in Dvor, Gvozd, Pakrac and Hrvatska Kostajnica, in order to assist entrepreneurs to secure the resources they need to engage in production activities that will lead to economic development for the entire local community.

Appendix A: General Situation Concerning Raw Materials¹¹

The forestlands in Croatia are classified as follows:

Total hectares of forest land	2,458,100
Total hectares of active forest	2,061,500
Total hectares of inactive forest	332,600
Total hectares of unfertile forest	64,000

The composition of the forests is as follows:

Hardwood	84%	Beech 35% Oak 27% Hornbeam 8% Ash 3% Other 11%
Softwood	16%	Spruce 13% Pine 2% Other 1%

These forests are all naturally occurring except for 94,000 hectares.

Croatia has a strong tradition of wood processing, based on a skilled workforce and the abundance and high quality of natural raw materials. Industrial wood processing started in the middle of the 19th century and its products have always formed a significant portion of Croatia's export earnings.

Supply of Wood

Wood fiber reserve stocks in Croatia are estimated to be 300 million cubic meters¹². Annual fiber growth within the forests in Croatia is estimated to be 5.5 million cubic meters gross¹³, out of which approximately 2.3 million cubic meters (m3) designated for harvesting in the wood products sector. Such harvest yields are as follows:

- 1.9 million m3 for sawmills
- 0.2 million m3 for veneer (extra quality)
- 0.2 million m3 small diameter logs

The direct export of these harvested logs is not significant, however such logs for export are generally of the best quality. There is further harvesting of forestlands for the paper industry and for energy. The volume of logs processed for pulpwood or fuel wood is approximately 1.8 million m3. In general, throughout Croatia there is overcapacity in sawmills and related operations due to the command economy of the former Yugoslavia regime. This is not the case in all the sub-regions, however. The ECRA region, which is the subject of this study, does not have excess capacities, except in the immediate area where DI 'Papuk' is located.

¹¹ Sources: Croatian Chamber of Commerce and Croatian Statistics Board

¹² Source: Hrvatske Sume

¹³ Source: Hrvatske Sume

Efficient use of the forests

It is important to Hrvatske Sume that local processors, particularly in beech and oak forested areas, begin utilizing the abundant wood assets in the area,. These forests are beginning to show signs of increasing age, which will reduce the forest's value in the long term. As trees continue to grow without being pruned or harvested, the value of the wood in terms of processing potential, and therefore price, drops significantly.

It is in the interests of HS that functioning, operational sawmill facilities are active in all major forested areas of Croatia to secure the long-term health of the forests. For this reason, some facilities in areas with a low concentration of sawmills may be able to secure long-term, favorable purchase agreements with the HS.

Exports and Imports

Croatia is one of the larger exporters of wood in the eastern and central European region. The main species exported are oak, beech, spruce and ash. During 2001, Croatia exported wood products as follows:

- USD 145 million in solid hardwood furniture
- USD 179 million of hardwood sawn boards, elements and floorings

During 2000 Croatia imported wood products as follows:

- USD 224 million in furniture
- USD 121 million in softwood lumber

Recent Improvements

Due to the civil war within the former Yugoslavia and the subsequent instability within the Balkans, privatization of state-owned enterprises was delayed and the maintenance and upgrading of manufacturing facilities were neglected. Recently, certain stakeholders in the wood processing industry in Croatia have started to invest in new equipment and factories:

DI 'Brestovac' Garešnica	Currently constructing chair factory
'Bor' Novi Marof	Currently constructing chair factory
'Spin Valis'	Currently constructing chair factory Currently constructing finger joint boards factory
'Tvin' Virovitica	Acquired Grubišno Polje and will re-start furniture production
New factory for sliced veneer	

Production of furniture is shifting from EU countries, with high wages and standards of living, to the Eastern European and Balkan states. That is a good opportunity for Croatia for the potential of securing Foreign Direct Investment into domestic wood processing capacities. For example 'Caligaris', from Italy is one of the biggest European producers of chairs and recently bought a factory in Ravna Gora, Croatia, and is steadily increasing production there. Additional Croatian furniture makers are becoming sole representative producers for some of these "producers", now wholesalers, in a plan of outsourced production.

Impact of a Croatian ban on the export of logs

Croatia has a surplus of sawmill processing capacity, but the best logs of the highest quality are bought on HS public auctions by European wood processors, and then exported. This is interpreted by many individuals in Croatia to be a strong argument in favor of banning the export of these high-quality logs, and therefore contributing to the development of the domestic wood processing industry. Recent statements by members of the Croatian government indicate that the Sabor may soon consider an export ban on unprocessed logs from Croatia.¹⁴

A quick look at the numbers involved exposes the fallacy of this argument. An export ban would only slightly increase the processing capacity of local sawmills, as less than 10% of the total available high-quality trunks in Croatia, namely 80,000 m³ annually, is actually exported. Approximately 40,000 m³ of this wood is poplar, which sawmills in Croatia do not need for processing, and the remainder (40,000 m³) is basically enough for the capacity of only one large sawmill.

In the context of this report pertaining to the ECRA region, an export ban could possibly result in a few hundred cubic meters of additional oak on the market in Majur. The other facilities covered here are not expected to benefit from an export ban.

¹⁴ Statements made by Minister of Economy Vojkovic and Minister of Reconstruction Cacic to the Croatian press on June 14th

Appendix B: Market Context

Croatia has a comparative advantage in the international wood processing industry due to several factors: 1) significant forests of beech and oak hardwood; and 2) a long tradition of success in wood products manufacturing; and 3) a reasonably skilled and low cost labor force with an overall low cost of production. Given that the companies in the ECRA region share this comparative advantage, it is logical to conclude that commonly accepted management practices and financial controls can yield profitable operations.

The revenue streams in the wood industry in Croatia are generally evaluated in three broad categories of exports: 1) logs; 2) primary and secondary semi-finished products; and 3) finished products, such as furniture, parquet, doors and windows etc. The wood industry in Croatia in recent years has been in decline in terms of total annual cubic meters of production of all products. Many wood companies functioning under the command economy of pre 1990 now find themselves non-competitive for numerous reasons. A complete overview of the entire wood industry is available elsewhere and is not the objective of this report.

Market research¹⁵ confirms that there is a demand for even the most primary wood products, which can be produced by the subject wood companies. Although the market demand is in a downward trend, following general global conditions, there remains a demand for volumes of primary and secondary products, but at reduced prices. Prices for processed wood, particularly beech, have been falling for the past 2-3 years. The consensus within the Croatian wood industry is that the current trend of lower prices is attributable to a number of factors: the collapse of the Chinese and Pacific Rim market as well as severe storms in 2001, mainly in France and also in Germany and Switzerland, which caused significant felling of forests and thereby created oversupply of beech wood in the international marketplace. Oversupply has lasted longer than originally expected due to the preserving of felled logs in lakes and rivers, thus preserving them for sawing over extended periods.

Further, there has been a general slowdown in the global economy and housing starts, along with related furniture sales, are down significantly. Additionally, there is no longer the fashion-driven demand for beech wood that has prevailed over the last 4-5 years. However, in general, the wood sector in Croatia can be competitive in the long term, due to the high quality of its oak and beech resources. While global market pricing is a significant factor, it is nevertheless not the only factor confronting the stakeholders in the wood industry in Croatia and in the ECRA region.

The market also drives the prices, in particular for hardwood species. Until the end of 2000, un-steamed (light colored) beech was in high demand, however this demand has now shifted towards oak. If the market is viewed over the longer period, in the last 15 years, there were such peaks of demand for steamed beech, ash, American (red) oak, pine, un-steamed beech and, currently oak. It can be concluded that the overall demand for beech wood and related products, in the long term, will remain strong within these fluctuations.

The market is also influenced by demands for so called “standard dimensions”. These are also changing.

- Ten years ago, beech wood was sold as: “un-edged, 2.0 meters minimum length”
- Currently, beech wood is sold as: “edged, 2.1 meters minimum length”

¹⁵ Research provided by Hrvatske Sume

Qualities, or specifications, are changing as well. One of the most common specifications in beech wood today is “un-steamed, four sides clear (Chinese Quality)”, which was a rather rare demand five years ago.

Market Segments

As mentioned above, the comparative strength for Croatian wood processors lies mainly in: 1) the quality of the raw material; 2) long experience in processing; and 3) proximity to the main markets. The new sawmills are also rather flexible in meeting market demands, quickly shifting production towards the more profitable programs.

Croatian producers are traditionally closely linked with Italian and Austrian markets, due to their geographical proximity. The buyers are usually significant finished goods producers, such as ‘Romea’ or ‘Archetti’ or wholesalers such as ‘Paldax’ or ‘Cora’. For purposes of this report, the term “Italian Market” is used for both the Italian and Austrian markets, because Italy is much bigger and both markets buy the same products. The Italian market is the most important market for the Croatian wood industry today.

The second market ranked by importance in exports is the Mediterranean basin, where the most important country is Egypt. This market is buying mainly steamed, edged or unedged, beech wood planks. In the last four years heartwood beech, in lengths greater than two meters, is accepted and this product is now one of the main products shipped. Oak is also bought, but in smaller quantities. The Egyptian market is known as a lower quality market and is particularly interesting for the sawmills near the ports, since the minimum shipment is 300 cubic meters, by sea. The important Egyptian buyers like ‘Moursi’ or ‘Hussein’ will take at 1000 cubic meter liftings. The goods are so called ‘shipping dry’, with moisture content at or below 25%. These parcels are usually air dried to this specification; either at the sawmill or at the port while the lifting is being assembled. Generally this drying process ranges from 45 days to 90 days, depending on temperatures and other weather conditions.

The third market ranked by importance in Croatia is the internal market. The old self-sufficient ‘kombinats’ are not functioning within the obsolete command economy and there is more outsourcing of production. The internal market is mainly for elements, used for flooring and other interior applications and for finger-jointed elements for lamination applications.

Wood drying

The cost of capital, both for buying kiln-drying chambers and for working capital needed for prolonged cycles, was until 2001 prohibitively high in Croatia (18% on average). The close proximity of the Italian market prevented deterioration of the green wood during transport. Italian producers dried these green goods according to their own specifications from different sources of production and could obtain a more uniform quality. Croatia has furniture factories currently operating and so the drying chambers of these furniture factories are captive capacity and cannot be used for drying secondary goods for the open market. Over the past several years, certain factories have built new chambers, however these are for increased internal production of either furniture or finger jointed glue/lam boards.

Except for the furniture elements and flooring products, goods are accepted as “green” (freshly sawn with no drying process). This partly explains why there are insufficient and outdated kiln drying capacities within Croatia. The fixed dimension elements are air-dried (to less than 30% moisture content), while thicker elements are accepted green.